

includes a MOSFET that is fed from the voltage supply ( $V_{cc}$ ) intended to be probed. (See the Specification, page 4, lines 20-22). As depicted in the embodiment of the present invention shown in FIG. 2, the drain of the MOSFET of the voltage probe is directly coupled to the local voltage supply  $V_{cc}$ , which may also be used to provide power to other IC components a distance away from the voltage probe. There is therefore no ambiguity as to where the local supply voltage is being probed, i.e., internally incorporated within the substrate of the IC, and also no ambiguity as to how the probe is coupled to the supply voltage, i.e., via the drain of a MOSFET.

Given this clear guidance within the specification and the knowledge generally available to those skilled in the art, it is submitted that the terms objected to in the Office Action would be understood by those skilled in the art and are definite. However, even if the specification were less than absolutely clear (which it is not), claims 1-18 would still be definite since the second paragraph of 35 U.S.C. § 112 merely requires that "the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity." M.P.E.P. § 2173.02 (emphasis added).

In view of the foregoing, it is respectfully submitted that claims 1 to 18 fully comply with the requirements of 35 U.S.C. § 112, and withdrawal of this rejection is therefore respectfully requested.

Claims 1-18 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,417,680 to Birdsley et al. (Birdsley).

In order for a claim to be anticipated under 35 U.S.C. § 102, a single prior art reference must disclose each and every element of the claim in exactly the same way. See Lindeman Maschinenfabrik v. Am. Hoist and Derrick, 730 F.2d 1452, 1458 (Fed. Cir. 1984).

Independent claim 1 recites an apparatus comprising a voltage probe incorporated in a VLSI circuit and coupled to a source of a local supply voltage, the voltage probe detectably emitting infrared radiation for probing instantaneous high-speed fluctuations of the local supply voltage in the integrated circuit, the radiation having an intensity that is related to a magnitude of the local supply voltage. In light of the foregoing discussion that the term "local supply voltage" is definite to those of skill in the art, it is submitted that Birdsley does not disclose each of the elements of claim 1 because it does not disclose a voltage probe that probes instantaneous high-speed fluctuations of the local supply voltage.

Birdsley concerns a method for testing active circuitry in a semiconductor device in which a laser is directed at the device to selectively excite circuitry, and the excited circuitry is monitored to determine a degree of integrity of the operation of the device. See Birdsley, col. 2, lines 24-29. Since Birdsley does not refer to a local supply voltage, let alone disclose that an intensity of infrared radiation is related to a magnitude of the local supply voltage, Birdsley certainly does not disclose detectably emitting infrared radiation for probing instantaneous high-speed fluctuations of the local supply voltage in the integrated circuit. In Birdsley, the emission of infrared radiation occurs as a result of the laser excitation and is not associated in any way with a magnitude of the local supply voltage.

Therefore, for at least the reasons given above, Birdsley does not anticipate claim 1, which is therefore patentable over Birdsley. As claims 2 and 3 depend from and further limit claim 1, they are also patentable over Birdsley.

As independent claim 4 recites an apparatus that includes a MOSFET device that detectably emits infrared radiation for probing instantaneous high-speed fluctuations of the local supply voltage in an integrated circuit, claim 4, and claims 5-8, which depend from claim 4, are also patentable over Birdsley.

Independent claim 9 recites an apparatus that includes a decoupling capacitor incorporated in an integrated circuit and coupled to a source of the local supply voltage which detectably emits infrared radiation for probing instantaneous high-speed fluctuations of a local supply voltage in an integrated circuit. As discussed above with respect to claim 1, Birdsley does not disclose any device coupled to a source of the local supply voltage which detectably emits infrared radiation for probing instantaneous high-speed fluctuations of a local supply voltage in an integrated circuit, let alone a decoupling capacitor. Therefore, claim 9, and claim 10 which depends from claim 9, are patentable over Birdsley.

As independent claim 11 recites a method for probing instantaneous high-speed fluctuations of a local supply voltage which comprises, *inter alia*, emitting infrared radiation using a local voltage probe, and determining local supply voltage fluctuation as a function of the sampled emitted radiation intensity, it is patentable over Birdsley for at least the same reasons as claim 1, as are its dependent claims 12-18.

CONCLUSION

All issues having been addressed, it is believed that the present application is in condition for allowance. Prompt reconsideration and allowance of the present application are respectfully requested.

Respectfully submitted,

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